

Appl. No. : 10/659,941
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AMENDMENTS TO THE CLAIMS

1. (Currently amended) A physiologically acceptable concentrated beta-glucan composition comprising a glucan having a mixed $\beta(1,3)(1,4)$ linked glucopyranosyl backbone [linkages] prepared in an alcohol free process in the absence of organic solvents, wherein said beta-glucan composition has a concentration greater than 7% by weight.

2. (Currently amended) The composition of Claim 1, wherein the concentration of said beta glucan is greater than 68% by weight.

3. The composition of Claim 1, wherein said beta-glucan is produced by a method comprising:

- a) providing an alkaline aqueous extract of a beta glucan source;
- b) acidifying or neutralizing said extract and heating said extract to between about 60° C and 100° C;
- c) cooling said extract, whereby a flocculate is formed;
- d) acidifying said cooled extract if said extract was neutralized in step (b); and
- e) removing said flocculate from said extract to form a beta-glucan containing solution.

4. The composition of Claim 1, wherein said beta glucan is produced by a method comprising heating a beta-glucan containing solution to allow evaporation therefrom, whereby a solid film enriched in beta-glucan is formed on the surface of said solution.

5. The composition of Claim 4, wherein said method further comprises the step of removing said beta-glucan film, resulting in the formation of a second beta-glucan film.

6. The composition of Claim 5, wherein said beta glucan film removing step is performed one or more times.

7. The composition of Claim 4, wherein said method further comprises the step of drying said beta-glucan film.

8. The composition of Claim 1, wherein said beta glucan has a molecular weight of at least about 50 kDa.

9. The composition of Claim 1, wherein said beta glucan is selected from those obtainable from oats, barley, wheat, rye, corn, rice, sorghum, millet, or amaranth.

10. The composition of Claim 1, wherein said beta glucan is formulated for oral administration.

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11. (Currently amended) A dietary supplement for reducing low density lipoprotein and total serum cholesterol comprising concentrated (1,3)(1,4)- beta glucan having a mixed $\beta(1,3)(1,4)$ linked glucopyranosyl backbone prepared in an alcohol free process in the absence of organic solvents, wherein said beta-glucan has a concentration greater than 7% by weight.

12. (Currently amended) The supplement of Claim 11, wherein the concentration of said beta glucan is greater than 68% by weight.

13. The supplement of Claim 11, wherein said beta-glucan is produced by a method comprising:

- a) providing an alkaline aqueous extract of a beta glucan source;
- b) acidifying or neutralizing said extract and heating said extract to between about 60° C and 100° C;
- c) cooling said extract, whereby a flocculate is formed;
- d) acidifying said cooled extract if said extract was neutralized in step (b); and
- e) removing said flocculate from said extract to form a beta-glucan containing solution.

14. The supplement of Claim 11, wherein said beta glucan is produced by a method comprising heating a beta glucan containing solution to allow evaporation therefrom, whereby a solid film enriched in beta-glucan is formed on the surface of said solution.

15. The supplement of Claim 14, wherein said method further comprises the step of removing said beta-glucan film, resulting in the formation of a second beta-glucan film.

16. The supplement of Claim 15, wherein said beta glucan film removing step is performed one or more times.

17. The supplement of Claim 14, wherein said method further comprises the step of drying said beta-glucan film.

18. The supplement of Claim 17, wherein said film is milled, powdered, dissolved or otherwise dispersed.

19. The supplement of Claim 11, wherein said beta glucan has a molecular weight of at least about 50 kDa.

20. The supplement of Claim 11, wherein said beta glucan is selected from those obtainable from oats, barley, wheat, rye, corn, rice, sorghum, millet, or amaranth.

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21. The supplement of Claim 11, wherein said beta glucan is formulated for oral administration.

22. (Currently amended) A composition comprising concentrated (1,3)(1,4) beta glucan having a mixed $\beta(1,3)(1,4)$ linked glucopyranosyl backbone in a cosmetic composition, wherein said beta glucan is prepared in an alcohol free process without the use of organic solvents, and wherein said beta-glucan has a concentration greater than 7% by weight.

23. (Currently amended) The composition of Claim 22, wherein the concentration of said beta glucan is greater than 68% by weight.

24. The composition of Claim 22, wherein said beta-glucan is produced by a method comprising:

- a) providing an alkaline aqueous extract of a beta glucan source;
- b) acidifying or neutralizing said extract and heating said extract to between about 60° C and 100° C;
- c) cooling said extract, whereby a flocculate is formed;
- d) acidifying said cooled extract if said extract was neutralized in step (b); and
- e) removing said flocculate from said extract to form a beta-glucan containing solution.

25. The composition of Claim 22, wherein said beta glucan is produced by a method comprising heating a beta glucan containing solution to allow evaporation therefrom, whereby a solid film enriched in beta glucan is formed on the surface of said solution.

26. The composition of Claim 25, wherein said method further comprises the step of removing said beta-glucan film, resulting in the formation of a second beta-glucan film.

27. The composition of Claim 26, wherein said beta glucan film removing step is performed one or more times.

28. The composition of Claim 25, wherein said method further comprises the step of drying said beta-glucan film.

29. The composition of Claim 28, wherein said film is milled, powdered, dissolved or otherwise dispersed prior to combination with said cosmetic composition.

30. The composition of Claim 22, wherein said beta glucan has a molecular weight of at least about 50 kDa.

31. The composition of Claim 22, wherein said beta glucan is selected from those obtainable from oats, barley, wheat, rye, corn, rice, sorghum, millet, or amaranth.

32. (Currently amended) A composition comprising concentrated (1,3)(1,4) beta glucan having a mixed $\beta(1,3)(1,4)$ linked glucopyranosyl backbone in combination with a food product, wherein said beta glucan is prepared in an alcohol free process without the use of organic solvents, and wherein said beta-glucan composition has a concentration greater than 7% by weight.

33. (Currently amended) The composition of Claim 32, wherein the concentration of said beta glucan is greater than 68% by weight.

34. The composition of Claim 32, wherein said beta glucan is produced by a method comprising:

- a) providing an alkaline aqueous extract of a beta glucan source;
- b) acidifying or neutralizing said extract and heating said extract to between about 60° C and 100° C;
- c) cooling said extract, whereby a flocculate is formed;
- d) acidifying said cooled extract if said extract was neutralized in step (b); and
- e) removing said flocculate from said extract to form a beta glucan containing solution.

35. The composition of Claim 32, wherein said beta glucan is produced by a method comprising heating a beta-glucan containing solution to allow evaporation therefrom, whereby a solid film enriched in beta-glucan is formed on the surface of said solution.

36. The composition of Claim 35, wherein said method further comprises the step of removing said beta-glucan film, resulting in the formation of a second beta-glucan film.

37. The composition of Claim 36, wherein said beta glucan film removing step is performed one or more times.

38. The composition of Claim 35, wherein said method further comprises the step of drying said beta-glucan film.

39. The composition of Claim 38, wherein said film is milled, powdered, dissolved or otherwise dispersed prior to combination with said food product.

40. The composition of Claim 32, wherein said beta glucan has a molecular weight of at least about 50 kDa.

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41. The composition of Claim 32, wherein said beta glucan is selected from those obtainable from oats, barley, wheat, rye, corn, rice, sorghum, millet, or amaranth.

42. (Currently amended) A pharmaceutical composition comprising concentrated (1,3)(1,4) beta glucan having a mixed $\beta(1,3)(1,4)$ linked glucopyranosyl backbone and a pharmaceutically acceptable carrier, wherein said beta glucan is prepared in an alcohol free process without the use of organic solvents, and wherein said beta-glucan has a concentration greater than 7% by weight.

43. (Currently amended) The composition of Claim 42, wherein the concentration of said beta glucan is greater than 68% by weight.

44. The composition of Claim 42, wherein said beta glucan is produced by a method comprising:

- f) providing an alkaline aqueous extract of a beta glucan source;
- g) acidifying or neutralizing said extract and heating said extract to between about 60° C and 100° C;
- h) cooling said extract, whereby a flocculate is formed;
- i) acidifying said cooled extract if said extract was neutralized in step (b); and
- j) removing said flocculate from said extract to form a beta glucan containing solution.

45. The composition of Claim 42, wherein said beta glucan is produced by a method comprising heating a beta-glucan containing solution to allow evaporation therefrom, whereby a solid film enriched in beta-glucan is formed on the surface of said solution.

46. The composition of Claim 45, wherein said method further comprises the step of removing said beta-glucan film, resulting in the formation of a second beta-glucan film.

47. The composition of Claim 46, wherein said beta glucan film removing step is performed one or more times.

48. The composition of Claim 45, wherein said method further comprises the step of drying said beta-glucan film.

49. The composition of Claim 48, wherein said film is milled, powdered, dissolved or otherwise dispersed prior to combination with said food product.

50. The composition of Claim 42, wherein said beta glucan has a molecular weight of at least about 50 kDa.

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51. The composition of Claim 42, wherein said beta glucan is selected from those obtainable from oats, barley, wheat, rye, corn, rice, sorghum, millet, or amaranth.

52. The composition of Claim 42, wherein said beta glucan is formulated for oral administration.